

**REMARKS**

In accordance with the foregoing, the claims have been amended and reconsideration is respectfully requested. Claims 1, 2, 7, 8, 13-16, 18, 21, 37-39, 44-47, 49, 53 and 54 are pending and under consideration. Claims 3-6, 9, 11, 12, 17, 19, 20, 22-36, 41-43, 48 and 50-52 have been cancelled without prejudice to or disclaimer of the subject matter recited therein.

Claim 1, 37 and 54 are the independent claims.

Claims 1, 2, 37 and 54 have been amended.

Claims 55 and 56 have been newly added.

Applicants acknowledge with appreciation the Examiner's indication that claims 10 and 40 contain allowable subject matter. These claims have been recast as independent claims 55 and 56 and are now believed to be in allowable form.

**I. REJECTIONS UNDER 35 USC §102(a)**

Claims 1, 2, 7, 8, 13, 15, 18, 21, 37-39, 44, 46, 49 and 53 stand rejected under 35 USC §102(a) as being anticipated by the Prior Art in the specification as originally filed at pages 2-4 and in FIGs. 1-4.

The Prior Art of the specification and FIGs. 1-4 as originally filed do not disclose all the limitations of claim 1. Rather, as is shown in FIG. 4, the light division and detection unit of the prior art uses a plurality of inner portions and a plurality of outer portions to detect a plurality of signals. The plurality of signals is then used to detect a thickness variation. In order to detect the thickness variation, the conventional optical pickup described requires "subtracting a sum of detection signals a2 and c2 of the first and third outer sections A2 and C2 in one diagonal direction of the photodetector 25, and the detection signals b1 and d1 of the second and fourth inner sections B1 and D1, respectively, in the other diagonal direction, from a sum of detection signals a1 and c1 of the first and third inner sections A1 and C1, respectively, in the one diagonal direction, and detection signals b2 and d2 of the second and fourth outer sections B2 and D2, respectively, in the other diagonal direction." (See paragraphs 0010-0011 at page 3 of the application as originally filed). This is a very specific disclosure of the necessary plurality of elements required to achieve a thickness variation signal  $St'$ , as seen by the equation  $St' = (a1+c1+b2+d2)-(a2+c2+b1+d1)$ . Even limiting the selection of signals, for the sake of argument, to a1 and a2 does not teach or suggest encircling the first light beam portion with a second light

beam portion as recited in the claims. The larger area A2 does not encircle the smaller area A1. No grouping such as A1, B1, C1 and D1 is taught or suggested by the background of the specification.

In contrast, amended claim 1 recites, inter alia, "a light beam division and detection unit dividing the incident light beam passed through the objective lens and the optical path changer after being reflected from the recording medium into a first light beam portion and a second light beam portion **encircling** the first light beam portion, and detecting first and second detection signals from the first and second light beam portions." (Emphasis added).

It is respectfully submitted that any combination of first and second signals from the background of the subject application specification does not encircle the other and then detect thickness based on the difference between the **encircled** portions. This is because the thickness variation signal St' requires combinations of the inner and outer portions of the photodetector 25. Even selecting photodetectors from the same detector group, e.g., a1 and A2, will not disclose "encircling" as recited in the claims.

Independent claim 37 recites similar limitations as claim 1 and is believed allowable for the same reasons.

In view of the above, it is respectfully submitted that the rejection of independent claims 1 and 37 is overcome. In addition, for at least a similar rationale, it is respectfully submitted that claims 2, 7, 8, 13, 15, 18, 21, 38-39, 44, 46, 49 and 53, depending from the independent claims, either directly or indirectly, are also in proper condition for allowance.

Claims 1, 2, 7, 8, 13, 14, 21, 37-39, 44, 45, 49 and 54 stand rejected under 35 USC §102(a) as being anticipated by Matsuura (US Pat. No. 6,510,111, "Matsuura").

Matsuura discloses an apparatus to correct aberrations that occur in the apparatus as it is using reflected light. The optical pickup includes an aberration correcting part 10 that includes a photodetector 11, a tracking controller 12, a thickness/focus controller 13 and a tilt controller 14. The photodetector 11 receives an S wave. The S wave is the light beam reflected from the disk 1 after it has been split by the phase beam splitter 9 into two waves, the S wave and a P wave. The photodetector 11 has light receiving areas A1 through A4 and B1 through B4. Signals from all of these pluralities of light receiving areas are then used to determine a thickness variation. (See Matsuura col. 11, lines 41-51 and col. 13, lines 36-62). However, unlike the grouping suggested in the Office Action, Matsuura teaches that the groups of the light

receiving areas are two separate light receiving areas, a first light receiving area 11a and a second light receiving area 11b. Each of the light receiving areas 11a and 11b is a mix of the pluralities of individual light receiving areas. However, as disclosed in Matsuura, the thickness variation is detected by calculating the following equation with signals received from corresponding light receiving areas.  $THES = (A1+B1+k1(A3+B3)) - k2(A2+B2+k1(A4+B4))$ .

In contrast, amended claims 1, 37 and 54 recite, "a light beam division and detection unit dividing the incident light beam passed through the objective lens and the optical path changer after being reflected from the recording medium into a first light beam portion and a second light beam portion **encircling** the first light beam portion, and detecting first and second detection signals from the first and second light beam portions." (Emphasis added).

In the Action at page 5, the Examiner states that "the detection unit can be considered to be divided into a first light beam portion ( $A2+B2+A4+B4$ ) and a second light beam portion ( $A1+B1+A3+B3$ ).\" This sandwich arrangement does not teach or suggest the encircling light beams as claimed in the subject application.

In view of the above, it is respectfully submitted that the rejection of independent claims 1, 37 and 54 is overcome. In addition, for at least a similar rationale, it is respectfully submitted that claims 2, 7, 8, 13, 14, 21, 38-39, 44, 45 and 49, depending from the independent claims, either directly or indirectly, are also in proper condition for allowance.

## II. REJECTIONS UNDER 35 USC §103(a)

Claims 14, 16, 45 and 47 stand rejected under 35 USC §103(a) as being unpatentable over the Prior Art in the specification as originally filed at pages 2-4 and in FIGs. 1-4, in view of Matsuura.

Each of the rejected claims depends, either directly or indirectly, from independent claims 1 and 37. The cited references, either alone or in any proper combination, do not teach or suggest each of the limitations of the independent claims. Accordingly, for at least a similar rationale to that discussed above in the arguments in support of allowability of claims 1 and 37, claims 14, 16, 45 and 47 are believed in proper condition for allowance.

## III. NEW CLAIMS

Claims 55 and 56 are newly added. These claims correspond to objected to claims 10

and 40 as originally filed, which have been recast in independent form. Accordingly, it is respectfully submitted that claims 55 and 56 are in proper condition for allowance.

#### IV. CONCLUSION

Applicants submit that this Amendment After Final Rejection clearly places the subject application in condition for allowance. This Amendment was not earlier presented, because Applicants believed that the prior Amendment placed the subject application in condition for allowance. Accordingly, entry of the instant Amendment as an earnest attempt to advance prosecution and reduce the number of issues is requested under 37 C.F.R. § 1.116.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Applicants believe that the present Amendment is responsive to each of the points raised by the Examiner in the Official Action. However, if there are any formal matters remaining after this response, the Examiner is respectfully requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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